

REMARKS

In accordance with the foregoing, claims 1, 17, and 24 have been amended. No new matter has been submitted. Claims 1, 4-8, 10-14, 17, 18, 23, 24 and 27-30 are pending and under consideration. Reconsideration is respectfully requested.

Briefly, claim 1 has only been amended to avoid a potential §112 issue regarding the phrasing of "minor channel numbers received the demanded major channel." Claim 24 has similarly been amended to remove a double bracketing that is not necessary. This particular amendment to claim 1 should be expected to avoid such a potential problem and is consistent with claim 1 before the previous amendment. In addition, the amendment to claim 24 merely removes an unnecessary bracketing. Thus, these particular amendments merely put claims 1 and 24 in better condition for allowance, and do not raise any new issues that would require any additional searches. Entry and consideration is respectfully requested.

ENTRY OF RESPONSE UNDER 37 C.F.R. §1.116

Applicants request entry of this Rule 116 Response and Request for Reconsideration because:

(a) the amendment was not earlier presented because the Applicant(s) believed in good faith that the cited prior art did not disclose the present invention as previously claimed;

(b) the amendment(s) of claims 1, 17, and 24 should not entail any further search by the Examiner since no new features are being added or no new issues are being raised;

(c) the amendments do not significantly alter the scope of the claims and place the application at least into a better form for appeal. No new features or new issues are being raised; and

Manual of Patent Examining Procedures sets forth in §714.12 that "[a]ny amendment that would place the case either in condition for allowance or in better form for appeal may be entered." (Underlining added for emphasis) Moreover, §714.13 sets forth that "[t]he Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified." The Manual of Patent Examining Procedures further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

REJECTIONS UNDER 35 U.S.C. § 103:

Claims 1, 7-8, 10-11, 13, 17-18, 23-24 and 27-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Vancelette (U.S. Patent No. 5,894,320), in view of Kim (U.S. Patent No. 5,838,386) and Han, (US PG-PUB 2003/0067555). This rejection is respectfully traversed.

It is respectfully submitted that the Office Action has briefly mischaracterized Vancelette and interpreted Kim to include feature not enabled or disclosed by the same. Lastly, it is noted that Han is not a proper §102 reference under 35 USC 103(c). The proper relied upon reference would appear to the published version, if published, of the Korean application Han derives priority from.

Vancelette discusses "FIG. 1 is a diagrammatic illustration providing an overview of an encoding, transmission, reception, and distribution scheme in accordance with the present invention. In one embodiment of the invention, a sporting event played on a field 10 is monitored by video cameras 12, 14 and 16, which include corresponding audio feeds. Cameras 12, 14 and 16 provide video and audio signals on channel A, channel B and channel C, respectively as shown. While three cameras and audio feeds are shown, it will be understood that additional cameras and audio feeds may be provided on additional channels. Furthermore, the audio feeds need not be associated with particular cameras. The video and audio signals from channels A, B, and C are provided to a processing function 22 of a transmitting apparatus 20" (col. 6, lines 1-15).

Here, Vancelette sets forth that multiple program feeds may be separately encoded and then multiplexed to be sent within a data stream, with the packets for each program multiplexed into the data stream having identification markers in their headers indicating which program they are associated with. A decoder can then selectively decode the appropriate packets for the desired program. As explained in Vancelette, the alternate programs multiplexed into the data stream may also be selectively decoded. Still further, Vancelette further sets forth an example where "the number of alternate audio and video signals provided from a particular service provider may vary. Accordingly, the headend operator may map the primary audio and video channel from the service provider to a new channel designator, and may map the alternative audio and video channels to other channel designators that are not currently assigned." Vancelette in col. 7, lines 35-43.

Vancelette also sets forth that a 'channel map' may be provided that would inform the decoder how to represent each program within the data stream, such as in the above example of separate channel mapping, and how to output each decoded channel, e.g., a defined channel

10 for one of the programs. In addition, in Vancelette, a "primary" signal or channel is merely a default choice among the available programs (audio and video, for example) that may be identified within control data provided to a decoder or later switched to by the user, e.g., a user choosing a different program, audio and/or video, of the data stream to view. Thus, 'primary' signal or program refers to the default program to be displayed, or the later chosen and displayed alternate audio and/or video, i.e., other programs.

Thus, the Office Action's interpretation of Vancelette slightly mischaracterizes the disclosure and system of Vancelette. Vancelette does not set forth a primary 'channel', and separate minor channels. Rather, Vancelette sets forth equally based programs that can be selectively decoded. Decoded control information may force the decoder to automatically begin with one of the programs within a data stream, but a user may then change either of the audio or video through selection of another program. At that time, it would appear that other program becomes the 'primary' signal/channel. Thus, the 'primary' signal/channel/program of Vancelette cannot be considered a "major" channel, when claim 1, for example, further requires there to be "minor" channels related to the major channel.

Regardless, as noted above and admitted by the Examiner, Vancelette further fails to discuss or suggest "displaying the minor channel numbers received through the demanded major channel."

Vancelette discusses "the audio and video data packets are time-multiplexed by multiplexer 26 to provide the packetized data stream 380. the data stream 380 is modulated at a specific carrier frequency according to the transmission scheme (E'G', via cable or satellite) and the programming service provider." (col. 8, lines 33-39).

Thus, as noted above, Vancelette merely discusses how to transmit "an audio and video data packets."

However, again, Vancelette fails to disclose or suggest how to display minor channel numbers received through the demand major channel.

Briefly, the Office Action further relies solely upon FIG. 6 and one sentence of Kim as supporting evidence of a displaying of minor channels. Specifically, FIG. 6 illustrates an example user interface that illustrates the displaying of a channel 0, and three picture-in-picture alternate channels 1, 2, and 3. The one sentence relied upon in the Office Action recites: "That is to say, main channel CH0 and several sub-channels CH1, CH2, and CH3 may be displayed on screen 62 as illustrated in general OSD circuit, if remote controller 61 is operated to display menu 64"

Thus, according to Kim, the termed "sub-channels" are displayed in a like manner as the

channel 0. The illustration in FIG. 6 is not of a "channel number", but rather of the program of that channel number. This appears to be a type of picture-in-picture display. Thus, Kim fails to disclose or suggest the display of the claimed channel number.

More importantly, though, it is respectfully submitted that the vagueness and unclear nature of this lone sentence and FIG. 6 of are not enabling for the disclosure and teaching suggested in the Office Action. MPEP 2121.01 explains that "[t]he disclosure in an assertedly anticipating reference must provide an enabling disclosure of the desired subject matter; mere naming or description of the subject matter is insufficient, if it cannot be produced without undue experimentation. *Elan Pharm., Inc. v. Mayo Found. For Med. Educ. & Research*, 346 F.3d 1051, 1054, 68 USPQ2d 1373, 1376 (Fed. Cir. 2003). Further, "[e]ven if a reference discloses an inoperative device, it is prior art for all that it teaches." *Beckman Instruments v. LKB Produkter AB*, 892 F.2d 1547, 1551, 13 USPQ2d 1301, 1304 (Fed. Cir. 1989). Therefore, 'a non-enabling reference may qualify as prior art for the purpose of determining obviousness under 35 U.S.C. 103.' *Symbol Techs. Inc. v. Opticon Inc.*, 935 F.2d 1569, 1578, 19 USPQ2d 1241, 1247 (Fed. Cir. 1991).

Here, a non-enabling reference can still be prior art, but it must be evaluated as only to what actually teaches. Conversely to the permissible interpretation of claim features, as to their broadest reasonable interpretation, where all potential implementations and embodiments may be envisioned and compared to a reference with such an implementation and/or embodiment, each reference must be interpreted solely on what it actually discloses when interpreting the reference, not as to any and all potential meanings or interpretations. When it is unclear what the reference is actually disclosing, and there may be many different interpretations of the same, that description is vague and should not be considered enabling for the relied upon portion.

As detailed in the Office Action, there are several ways to interpret the described channels 0-3. The Office Action has chosen an interpretation that will read on the claimed minor channels. However, there is no actual disclosure or suggestion within Kim that clarifies what the termed "sub-channels" is supposed to mean. Thus, meanings of this very brief termed "sub-channel" in Kim cannot be sufficient for reliance as "evidence" of either the disclosure or the claimed minor channels or the minor channel numbers, and further cannot be sufficient evidence for supporting a "reason" for including such a brief mentioned display within Vacelle. Thus, there is insufficient disclosure or explanation within Kim as to actual meaning of the termed "sub-channels" to support the Office Action's prima facie obviousness case.

Briefly, Kim further fails to discuss whether minor channel numbers are displayed on a digital television.

Again, main channel CH 0 and several sub-channels CH1, CH2 and CH3 of Kim have no relations as recited claim 1, for example, "displaying on a television screen, as a viewing program, a program of a minor channel numbers received through the demanded major channel...wherein the displayed minor channel numbers comprise at least one minor channel number corresponding to the program of a minor channel which is not currently displayed."

Thus, Kim fails to discuss "displaying on the digital television, minor channel numbers received through the demanded major channel." (emphasis added). Further, even if Vacelette were to be modified to include the OSD feature of Kim, the combination still would not disclose or suggest the displaying of the minor channel numbers received through the demanded major channel.

As noted above, Kim fails to displaying on the television screen, minor channel numbers received through the demanded major channel while displaying not all but a program of a minor channel as disclosed in the present invention.

In Vacelette, each of the programs is encoded and separate packets are generated for each program. All corresponding packets for the different programs are multiplexed and sent through a data stream to a decoder. Then, the decoder selects packets corresponding to either a default program setting or a user selected program setting. Thus, each program is separate and each set of packets for each program are separate. One 'channel' or program is not "received through" another channel.

Han discusses "[i]t will be appreciated that HDTV signals are suppressed so that video and audio information can be transmitted in frequency bands of 6 MHz for every channel. The HDTV signals provided by the transmitter are randomized for signal power, so as to be uniformly distributed in the television channel broadcasting bands of 6 MHz. This randomization makes a receiver perform a channel equalization operation, the randomized signal advantageously allows the receiver to recover symbol timing using a self-timing recovery procedure." (see paragraph[0028] of Han).

Han discusses dual receiver system which can receive HDTV and NTSC signal but further fails to discuss how to display minor channel numbers on a digital television.

As such, Han fails to discuss whether minor channel numbers are displayed on a digital television. In addition, Han fails to disclose or suggest the aforementioned deficient features such that a combination of Vacelette, Kim, and Han would disclose or suggest all recited feature of each claim.

None of cites artdiscloses "the displayed minor channel numbers comprise at least one minor channel number corresponding to a program of a minor channel which is not currently

displayed" as disclosed in the present invention.

Accordingly, it is respectfully submitted that the combination of Vancelette, Kim, and Han does not teach or suggest the invention as recited in claim 1.

Claim 7 is patentable due at least to the similar rationale as claim 1, as well as for the additional recitations therein.

Claim 8 at least further recites "said minor channel numbers are arranged in a prescribed direction on the digital television."

Kim discloses Ch 1, Ch 2, Ch 3, and Ch 0 are displayed in FIG. 6.

Again, Kim fails to discuss minor channel numbers.

Thus, Kim does not disclose how to arrange minor channel numbers as recited in claim 8.

Accordingly, it is respectfully submitted that it is respectfully submitted that the combination of Vancelette, Kim, and Han does not teach or suggest the invention as recited in claim 8.

Claims 10-11, and 13 are patentable due at least to their depending from claim 7, as well as for the additional recitations therein.

Claim 17 has been amended to clarify the present application.

Claim 17 is patentable due at least to the similar rationales as claim 1.

Claim 18 at least further recites "wherein the display displays the minor channel numbers and the major channel number simultaneously and displays in a format of X, X-1, X-2 . . . X-n, wherein X is the major channel number, 1, 2 . . . n are minor channel numbers, and n is the highest minor channel number."

Again, Kim merely discloses CH 0, CH 1, CH 2, and CH 3.

Further, Kim clearly shows different format from as recited in claim 18.

Accordingly, it is respectfully submitted that it is respectfully submitted that the combination of Vancelette, Kim, and Han does not teach or suggest the invention as recited in claim 18.

In addition, claim 27 is patentable due at least to its depending from claim 1, as well as for the additional recitations therein.

Regarding claims 23 and 28, the office action sets forth that Official Notice is taken that at the time the invention was made.

By taking Official Notice, the rejection is being based, in part, on the personal knowledge of the Examiner. The personal knowledge of the Examiner, when used as a basis for a rejection, must be supported by an affidavit as to the specifics of the facts of that knowledge

when called for by the applicant. See, MPEP 2144.03, 37 C.F.R. § 1.104(d)(2). In short, the rules of the U.S. Patent and Trademark Office require that the Examiner must either support this assertion with an Affidavit, or withdraw the rejection. Therefore, it is further respectfully requested that the Examiner support the rejection with either an affidavit or a reference, or withdraw the rejection.

Regarding claims 29 and 30, Vancelette discusses "FIG. 3 is a diagrammatic illustration of an in-band packetized data stream in accordance with the present invention. The packetized data stream from function 22 in FIG. 1 is provided to encryptor/multiplexer 26. The data stream includes channel A video packets 310, channel A audio packets 320, channel B video packets 330, channel B audio packets 340, channel C video packets 350, and channel C audio packets 360. Also included are in-band control data packet PID 0, shown at 370, and in-band control data packet PID 1, shown at 380. The audio and video packets of a particular channel are shown grouped in a video/audio pair, but this is not required. For instance, an audio feed can be provided without an accompanying video feed. The audio and video data packets are time-multiplexed by multiplexer 26 to provide the packetized data stream 380. The data stream 380 is modulated at a specific carrier frequency according to the transmission scheme (e.g., via cable or satellite) and the programming service provider. For example, network X may use a 6 MHz bandwidth at a carrier frequency of 1.2 GHz to broadcast its signal over the satellite link (40, 42, 44) of FIG. 1. Moreover, the ten channels carried in a 6 MHz bandwidth may correspond to one or more programming service providers. Similarly, a single service provider may consume a spectrum of more than 6 MHz."(col. 8, lines 21-45).

As noted above, Vancelette fails to discuss minor channel numbers are on a same RF band as the major channel.

Accordingly, it is respectfully submitted that it is respectfully submitted that the combination of Vancelette, Kim, and Han does not teach or suggest the invention as recited in claims 29 and 30.

Claims 4 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Vancelette Kim and Han, further in view of Etherdge (U.S. Patent No. 6,172,674).

Etherdge discusses "in step 624, the system receives a selection from the user, the user can select an of the pop-up symbols in one option, if the user does not select a symbol within a predetermined amount of time, the entire dialog, or just the pop-up symbols, can be removed form the display."(col. 15, lines 10-15).

Etherdge discusses a particular pop-up menu, but fails to discuss "further comprising hiding said minor channel numbers after a prescribed time elapses" as recited in claim 4.

As noted above, Kim does not disclose minor channel numbers as recited in claim 4.

Accordingly, it is respectfully submitted that it is respectfully submitted that neither Kim nor Etheredge, either alone or in combination, teach or suggest the invention as recited in claim 4.

Similarly, Kim does not disclose major channel number as recited in claim 6.

Regarding claim 5, Kim provides for the user to select a sub channel for display.

Claim 5 recites "changing a current channel to a demanded minor channel in response to a demand to change a minor channel and returning to said displaying of minor channel numbers."

Accordingly, it is respectfully submitted that it is respectfully submitted that none of Vancelette, Han, Kim or Etheredge, alone or in combination, teach or suggest the invention as recited in claim 5.

Claims 12 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Vancelette, Kim and Han, in view of Keenan (U.S. Patent No. 5,161,023).

Keenan discusses "similarly, scanning up beyond the first channel stored in the scan list causes the tuning of the last channel in the scan list. This method of operation is known as "wrapping around" from top to bottom or, bottom to top. Inclusion of a scan list feature in a television receiver having multiple RF input terminals is known from the RCA CTC-133 color television receiver, manufactured by Thomson Consumer Electronics, Inc., Indianapolis, Ind. In this receiver, each RF input terminal has a separate scan list associated with it."(col. 1, lines 50-59-emphaiss added).

In contrast, claim 12 recites "if said channel up key is pressed, determining if the minor channel number of said viewing program is a highest number among said minor channel numbers; if the manor channel number of said viewing program is the highest number, displaying a program of a lowest minor channel number as said viewing program, and returning to said displaying minor channel numbers..."

Thus, Keenan does not disclose how to determine if the minor channel number of said viewing program is a highest number among said minor channel numbers; if the manor channel number of said viewing program is the highest number, display a program of a lowest minor channel number as said viewing program, and returning to said displaying minor channel numbers..." as recited in clam 12.

Accordingly, it is respectfully submitted that it is respectfully submitted that neither Kim , Vancelette, nor Keenan, either alone or in combination, teach or suggest the invention as recited in claim 12.

In addition, claim 14 is patentable due at least to the similar rationales as recite in claim 12, as well as for the additional recitations therein.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.


Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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